UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,827	03/29/2001	Masaki Kakihara	P 279165 TYF-9951	1136

909 7590 11/06/2002

PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER
MEINECKE DIAZ, SUSANNA M

ART UNIT	PAPER NUMBER
3623	14

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/819,827	KAKIHARA ET AL.
	Examiner	Art Unit
	Susanna M. Diaz	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) *23-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3,4,7,9,10*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

SMD

DETAILED ACTION

1. This Non-Final Office action is responsive to Applicant's Election filed August 21, 2002.

Group I (claims 1-22) have been elected.

Claims 23-32 stand as non-elected claims and are therefore withdrawn from consideration.

Claims 1-22 are presented for examination.

Declaration

2. The declaration is defective. A declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:
Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

In the instant application, several attorneys' names have been crossed off of the declaration without any indication of who made such corrections.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because the pages of the specification including claims and abstract must be numbered consecutively, starting with 1, the numbers being centrally located above or preferably, below, the text (see 37 C.F.R. § 1.51). In the instant application, the following pages do not conform to the proper numbering format: pages 119/1, 129/1, 137/1, 145/1, 153/1, 160/1, 169/1, 172/1, 186/1, and 237/1.

Appropriate correction is required.

Claim Objections

6. Claim 21 is objected to because of the following informality:

Claim 21, last line of the claim: Delete "e"

Appropriate correction is required.

7. Claims 4-11 and 17-20 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot be dependent from another

multiple dependent claim. See MPEP § 608.01(n). For examination purposes, the following claim dependencies will be assumed:

Claim 4 is dependent from claim 1.

Claim 5 is dependent from claim 4, as recited in the claim.

Claim 6 is dependent from claim 5, as recited in the claim.

Claim 7 is dependent from claim 1.

Claim 8 is dependent from claim 7.

Claim 9 is dependent from claim 1.

Claim 10 is dependent from claim 1.

Claim 11 is dependent from claim 1.

Claim 17 is dependent from claim 14.

Claim 18 is dependent from claim 14.

Claim 19 is dependent from claim 18, as recited in the claim.

Claim 20 is dependent from claim 14.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 3, 12-20, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, it is not clear how the charge applicable area can be "formed from at least a toll area and a non-toll area" since, by definition, a non-toll area implies an area in which charge is not applicable.

Claim 12 recites a "storage means for storing data for charging related to...charge applicable areas set in the map information...and the charge applicable areas" (lines 4-8). It is not clear what the difference is, if any, between the claimed "charge applicable areas set in the map information" and "the charge applicable areas." Please clarify. [Claim 13 is dependent from claim 12 and therefore inherits the same rejection.]

Claim 14 recites the limitation "the moving body" in line 2. There is insufficient antecedent basis for this limitation in the claim. Further, it is not clear whether or not "a moving body" subsequently recited in line 4 of claim 14 refers to the same moving body that is recited in line 2. For examination purposes, "the moving body" recited in line 2 will be interpreted as "a moving body" and "a moving body" recited in line 4 will be interpreted as "the moving body."

Claim 14 recites the step of "adding the buffer area to the position information" (lines 6-7). It is not clear how the buffer area is added *per se* to the position information. Furthermore, the step recited immediately prior to the adding step specifies that a determination is made regarding the expected movement of the moving body. Since both of these steps are performed by the adding means, it is unclear whether or not the step of "adding the buffer area to the position information" is meant to assist in the determination of the expected movement of the moving body. If this is the case, how

does the step of "adding the buffer area to the position information" actually contribute to accomplishing this determination of the expected movement of the moving body?

Claim 14 recites the step of "deciding an entry state indicating whether or not the moving body has at least entered the charge applicable area ***based on the charge applicable areas and the buffer areas***" (lines 10-12). It is not clear how such a decision is based on the charge applicable areas and the buffer areas. For example, does this limitation mean that the position of the moving body is matched to the predetermined map information identifying charge applicable and buffer areas to then determine whether the moving body is in a charge applicable area or a buffer area?

Claim 14 recites the limitation "the charge applicable area" in line 11. There is insufficient antecedent basis for this limitation in the claim. For examination purposes, "the charge applicable area" will be interpreted as "one of the charge applicable areas."

Claim 14 recites the limitation "the buffer areas" in line 12. There is insufficient antecedent basis for this limitation in the claim. For examination purposes, "the buffer areas" will be interpreted as "the buffer area."

[Claims 15-20 are dependent from claim 14 and therefore inherit the same rejections.]

Claim 22 recites the limitation, "wherein the deciding means uses a buffer area which has been added to the position information by the adding means when the deciding means is deciding the state of entry" (lines 5-7). It is not clear how the buffer area is added *per se* to the position information. Furthermore, the limitation recited immediately prior in the claim specifies that a determination is made regarding the

expected movement of the moving body. Also, it is unclear whether or not the step of "adding the buffer area to the position information" (lines 4-5) is meant to assist in the determination of the expected movement of the moving body. If this is the case, how does the step of "adding the buffer area to the position information" actually contribute to accomplishing this determination of the expected movement of the moving body?

Appropriate correction and/or clarification is required.

In light of the numerous rejections of the claims under 35 U.S.C. 112, 2nd paragraph, and the issues raised by the improper dependence of multiple dependent claims from other multiple dependent claims, the following art rejection reflects the Examiner's best interpretation of the claimed invention.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

11. Claims 1-3, 9, 10, 12, and 14-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Widl (U.S. Patent No. 5,721,678).

Widl discloses a charging device comprising:

[Claim 1] detecting means for detecting position information of a moving body (col. 3, lines 14-65);

deciding means for determining a charge applicable area in predetermined map information and for determining a buffer area at a boundary between the charge applicable area and an area other than the charge applicable area, and matching the map information with the position information, and deciding an entry state indicating whether or not the moving body has at least entered into one of the charge applicable area or the buffer (col. 2, lines 31-63; col. 4, lines 21-28 – The fact that the vehicle's position is compared to geographical information in a database to determine whether or not the vehicle's location corresponds to a toll zone, i.e., a charge applicable area, signifies that the stored geographical information is equivalent to the claimed predetermined map information; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone); and

generating means for generating charging information for the moving body based on a result of a decision by the deciding means (col. 2, lines 59-63; col. 4, lines 18-67; col. 5, lines 25-34);

[Claim 2] wherein the generating means is provided with storage means in which toll data that is determined in advance and corresponds to the entry state is stored in

advance, and the charge information is generated using toll data of the storage means (col. 4, line 57 through col. 5, line 24);

[Claim 3] wherein the charge applicable area is formed from at least a toll area and a non-toll area, and the buffer area is set between the toll area and the non-toll area (col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone);

[Claim 9] wherein, when a history of the entry state is one in which the moving body moves from the charge applicable area to the buffer area and then back to the same charge applicable area again, generating of charge information relating to an entry into the charge applicable area is prohibited in the generating means (col. 3, lines 45-65; col. 4, lines 18-46 – When a vehicle enters a buffer area, e.g., an area where toll and non-toll roads cross, the vehicle is assumed to have remained on the toll road the entire time if it moves from the toll area to the buffer area and subsequently back to the same toll area; therefore, no extra entry and exit fees would be charged);

[Claim 10] wherein the generating means generates charge information relating to tolls determined based on a distance traveled in the charge applicable area (col. 5, lines 25-28).

Widl discloses a charging device, comprising:

[Claim 12] host moving body position detecting means for detecting a position of a host moving body (col. 3, lines 14-65);

storage means for storing data for charging relating to predetermined map information, charge applicable areas set in the map information, buffer areas set at boundaries between the charge applicable areas and areas other than the charge applicable areas, and the charge applicable areas (col. 2, lines 31-63; col. 4, lines 21-28 – The fact that the vehicle's position is compared to geographical information in a database to determine whether or not the vehicle's location corresponds to a toll zone, i.e., a charge applicable area, signifies that the stored geographical information is equivalent to the claimed predetermined map information; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone);

determining means for matching the map information with the position, and for determining whether or not the moving body has at least entered one of the charge applicable area and the buffer area (col. 2, lines 31-63; col. 4, lines 21-28 – The fact that the vehicle's position is compared to geographical information in a database to determine whether or not the vehicle's location corresponds to a toll zone, i.e., a charge applicable area, signifies that the stored geographical information is equivalent to the claimed predetermined map information); and

charge processing means for performing charge processing for a host moving body relating to the charge applicable area based on a result of a determination by the determining means (col. 2, lines 59-63; col. 4, lines 18-67; col. 5, lines 25-34).

Widl discloses a charging device, comprising:

[Claim 14] detecting means for detecting position information concerning the moving body (col. 3, lines 14-65);

adding means for determining a buffer area in which a moving body may be expected to move to from a detected position based on position information concerning the detected moving body, and adding the buffer area to the position information (col. 3, lines 45-50 – Dead reckoning is a technique for estimating the expected position of a moving body based on a last known position and details of direction and velocity of travel at that last known position. The area of expected movement can be interpreted as a buffer area; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone. This excerpt provides an alternate interpretation of a buffer area);

deciding means for deciding charge applicable areas in predetermined map information, for matching the position information to the map information, and for deciding an entry state indicating whether or not the moving body has at least entered the charge applicable area based on the charge applicable areas and the buffer areas

(col. 2, lines 31-63; col. 4, lines 21-28 – The fact that the vehicle's position is compared to geographical information in a database to determine whether or not the vehicle's location corresponds to a toll zone, i.e., a charge applicable area, signifies that the stored geographical information is equivalent to the claimed predetermined map information; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer zone. In a buffer zone, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone); and

generating means for generating charge information for the moving body based on a result of a decision by the deciding means (col. 2, lines 59-63; col. 4, lines 18-67; col. 5, lines 25-34);

[Claim 15] wherein the generating means is provided with storage means in which toll data that is determined in advance and corresponds to the entry state is stored in advance, and the charge information is generated using toll data of the storage means (col. 4, line 57 through col. 5, line 24);

[Claim 16] wherein the detecting means detects position information concerning a moving body based on satellite data from a position finding satellite (col. 3, lines 14-31);

[Claim 17] wherein the adding means sets the size of a buffer area based on a detection error by the detecting means (col. 3, lines 45-50 – Dead reckoning is a technique for estimating the expected position of a moving body based on a last known position and details of direction and velocity of travel at that last known position. The area of expected movement can be interpreted as a buffer area; col. 4, lines 18-46 – An

area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone. This excerpt provides an alternate interpretation of a buffer area; col. 3, lines 45-65; col. 4, lines 18-46 – Taking into account Widl's invention as a whole, a toll charge is only applied when it is certain that a vehicle is located in a toll area. Further, dead reckoning is used to estimate the position of a vehicle while the position detection system is temporarily malfunctioning "due to shielding effects or unfavorable satellite position; therefore, Widl's invention teaches the setting of the size of a buffer area based on a detection error by the detecting means since it refrains from charging a toll until the detection error is deemed to be overcome, i.e., "if the agreement between the position data is sufficiently exact" (col. 3, lines 60-61));

[Claim 18] wherein the detecting means includes estimating means for estimated position information concerning a moving body based on at least one of a direction in which the moving body is traveling and a distance traveled by the moving body information (col. 3, lines 45-50 – Dead reckoning is a technique for estimating the expected position of a moving body based on a last known position and details of direction and velocity of travel at that last known position);

[Claim 19] wherein the adding means sets the size of a buffer area based on at least one of a direction in which the moving body is traveling and a distance traveled by the moving body used in the estimating means (col. 3, lines 45-50 – Dead reckoning is a

technique for estimating the expected position of a moving body based on a last known position and details of direction and velocity of travel at that last known position. The area of expected movement can be interpreted as a buffer area; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone. This excerpt provides an alternate interpretation of a buffer area; col. 3, lines 45-65; col. 4, lines 18-46 – Taking into account Widl's invention as a whole, a toll charge is only applied when it is certain that a vehicle is located in a toll area. Further, dead reckoning is used to estimate the position of a vehicle while the position detection system is temporarily malfunctioning "due to shielding effects or unfavorable satellite position; therefore, Widl's invention teaches the setting of the size of a buffer area based on at least one of a direction in which the moving body is traveling and a distance traveled by the moving body used in the estimated means, i.e., "if the agreement between the position data is sufficiently exact" (col. 3, lines 60-61));

[Claim 20] wherein the generating means generates charge information relating to tolls determined based on a distance traveled in the charge applicable area (col. 5, lines 25-28).

Widl discloses a charging device, comprising:

[Claim 21] detecting means for detecting position information concerning the moving body (col. 3, lines 14-65);

deciding means for determining a charge applicable area in predetermined map information and for setting a buffer area at a boundary between the charge applicable area and an area other than the charge applicable area or at a position of a moving body detected by the detecting means, and matching the map information with the position information, and deciding an entry state indicating whether or not the moving body has at least entered one of the charge applicable area or the buffer area (col. 2, lines 31-63; col. 4, lines 21-28 – The fact that the vehicle's position is compared to geographical information in a database to determine whether or not the vehicle's location corresponds to a toll zone, i.e., a charge applicable area, signifies that the stored geographical information is equivalent to the claimed predetermined map information; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone); and

generating means for generating charge information for the moving body based on a result of a decision by the deciding means (col. 2, lines 59-63; col. 4, lines 18-67; col. 5, lines 25-34);

[Claim 22] adding means for determining a buffer area in which a moving body may be expected to move to from a detected position based on position information concerning the detected moving body, and adding the buffer area to the position

information, wherein the deciding means uses a buffer area which has been added to the position information by the adding means when the deciding means is deciding the state of entry (col. 3, lines 45-50 – Dead reckoning is a technique for estimating the expected position of a moving body based on a last known position and details of direction and velocity of travel at that last known position. The area of expected movement can be interpreted as a buffer area; col. 4, lines 18-46 – An area where a toll zone crosses a non-toll zone, e.g., at an area where there is a highway overpass and only one of the cross roads is a toll road, is a type of buffer area. In a buffer area, more location information is needed before it is decided whether or not the vehicle is traveling in a toll zone. This excerpt provides an alternate interpretation of a buffer area).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 4-8, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Widl (U.S. Patent No. 5,721,678), as applied to claims 1 and 12 above.

[Claims 4-8, 11] Widl discloses the use of a buffer area to reduce errors in billing tolls (as discussed above). Widl also teaches that different billing conventions may be used to assess tolls. For example, tolls may be charged based on vehicle type,

distance traveled in a toll zone or the time of day the vehicle is traveling through the toll zone (col. 4, lines 58-67; col. 5, lines 25-34). However, Widl does not expressly teach the setting of a buffer area between multiple toll areas. Official Notice is taken that it is old and well-known in the art of toll systems that the following toll scenarios exist: adjacent toll areas and a plurality of toll areas that have different toll systems. Since Widl uses buffer areas to help ensure that toll billing is being performed accurately by providing extra verification of a vehicle's route, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt Widl to assess charges among various adjacent toll areas with different toll systems, using a buffer area to separate each of the different toll areas (as per claims 4-6), in order to make Widl's invention more marketable by increasing its usage over a wider collection of toll areas while utilizing a buffer area to help accurately verify a vehicle's position, thereby ensuring accurate billing throughout the various toll areas.

Furthermore, as per claims 7 and 8, Widl discloses that when a vehicle has entered a buffer area, a decision must be made as to whether or not the vehicle is in a toll area. Once such a determination is made, a toll is then assessed if it has been decided that the vehicle is traveling along a toll road (col. 4, lines 18-46). This means that the toll for the buffer area is based on the toll of the appropriate toll area. In the modified version of Widl (i.e., where Widl handles multiple, adjacent toll areas), the toll for the buffer area would logically be set to the toll of the toll area in which the vehicle is determined to be traveling. In other words, based on Widl's explicit teachings of setting the toll of the buffer area to that of the adjacent toll area through which a vehicle is

traveling, the modified Widl would similarly determine tolls such that a toll for the buffer area is set based on a toll of one of adjacent areas (as per claim 7) or a toll of an area selected from a plurality of areas surrounding the buffer area (as per claim 8).

As per claim 11, Widl teaches the ability to charge tolls based on the distance traveled through a toll zone (col. 5, lines 27-28), yet he does not expressly disclose the charging of a toll based on a distance traveled, wherein this distance bridges a boundary between adjacent areas. However, the modified Widl facilitates toll charges across various toll areas. Furthermore, in light of Widl's disclosure of charging tolls based on distance traveled through a toll zone, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to further modify Widl such that its generating means is provided with storage means for storing a distance traveled in the charge applicable area when the distance traveled bridges a boundary between adjacent areas, and charge information is generated based on the stored distance traveled in order to facilitate such a toll charging procedure (i.e., based on distance traveled) throughout multiple toll areas, thereby making Widl's invention more marketable by enabling his invention to address the varying needs of multiple toll systems throughout a larger region.

[Claim 13] Widl discloses the use of a rechargeable "highway toll card" for making toll payments (col. 4, line 47 through col. 5, line 24), yet Widl fails to explicitly teach the use of an IC card for making toll payments. However, Official Notice is taken that the use of IC cards to make toll payments is old and well-known in the art of toll processing. IC

cards provide for a convenient and secure way of transferring funds, especially in a wireless payment system. Further, IC cards are not as susceptible to damage or fraud as their predecessors, such as magnetic payment cards. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to utilize an IC card as Widl's "highway toll card" to store a user's balance information in order to provide for a convenient and secure way of storing and transferring funds wirelessly while minimizing susceptibility to damage or fraudulent accounting activity.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (703) 305-1337. The examiner can normally be reached on Monday-Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington D.C. 20231

or faxed to:

(703)305-7687 [Official communications; including

After Final communications labeled "Box AF"]

(703)746-7048 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 22202, 7th floor receptionist.

Susanna Diaz

Susanna M. Diaz
Patent Examiner
Art Unit 3623
November 2, 2002